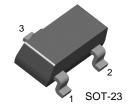


## **FJV992**

### **Audio Frequency Low Noise Amplifier**

• Complement to FJV1845



1. Base 2. Emitter 3. Collector

## **PNP Epitaxial Silicon Transistor**

### **Absolute Maximum Ratings** T<sub>a</sub>=25°C unless otherwise noted

Symbol	Parameter	Ratings	Units
$V_{CBO}$	Collector-Base Voltage	-120	V
$V_{CEO}$	Collector-Emitter Voltage	-120	V
V <sub>EBO</sub>	Emitter-Base Voltage	-5	V
I <sub>C</sub>	Collector Current	-50	mA
P <sub>C</sub>	Collector Power Dissipation	300	mW
TJ	Junction Temperature	150	°C
T <sub>STG</sub>	Storage Temperature	-55 ~ 150	°C

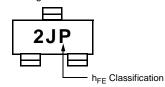
## Electrical Characteristics T<sub>a</sub>=25°C unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Max.	Units
BV <sub>CBO</sub>	Collector-Base Breakdown Voltage	$I_{C} = -100\mu A, I_{E} = 0$	-120		V
BV <sub>CEO</sub>	Collector-Emitter Breakdown Voltage	$I_C = -1 \text{mA}, I_B = 0$	-120		V
BV <sub>EBO</sub>	Emitter-Emitter Breakdown Voltage	$I_E = -10\mu A, I_C = 0$	-5		V
I <sub>EBO</sub>	Emitter-Base Cutoff Current	$V_{EB} = -6V, I_{C} = 0$		-30	nA
h <sub>FE1</sub>	DC Current Gain	$V_{CE} = -6V, I_{C} = -0.1 \text{mA}$	150		
h <sub>FE2</sub>		$V_{CE} = -6V, I_{C} = -1mA$	200	800	
V <sub>CE</sub> (sat)	Collector-Emitter Saturation Voltage	I <sub>C</sub> = -10mA, I <sub>B</sub> = -1mA		-300	mV
V <sub>BE</sub> (on)	Base-Emitter On Voltage	$V_{CE} = -6V$ , $I_{C} = -1mA$	-0.55	-0.65	V
f <sub>T</sub>	Current Gain Bandwidth Product	$V_{CE} = -6V$ , $I_{C} = -1mA$	50		MHz
C <sub>ob</sub>	Output Capacitance	$V_{CB} = -30V$ , $I_{E}=0$ , $f=1MHz$		3	pF
NV	Noise Voltage	$V_{CE} = -5.0V, I_{C} = -1.0mA,$ $R_{G} = 100KW, G_{V} = 80dB,$ f = 10Hz  to  1.0KHz		40	mV

## **h**<sub>FE2</sub> Classification

Classification	Р	F	Е
h <sub>FE2</sub>	200 ~ 400	300 ~ 600	400 ~ 800





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# **Typical Characteristics**

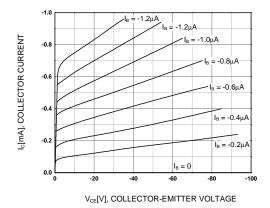


Figure 1. Static Characteristic

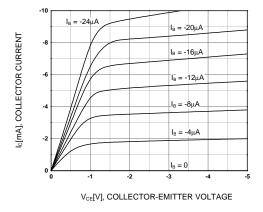


Figure 2. Static Characteristic

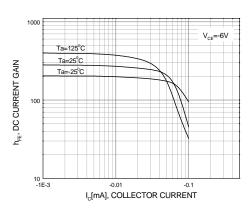


Figure 3. DC current Gain

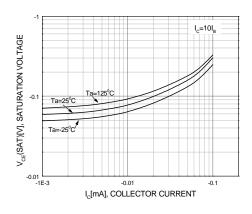


Figure 4. Collector-Emitter Saturation Voltage

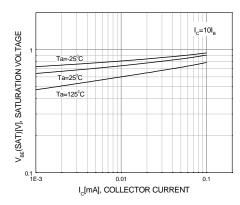


Figure 5. Base-Emitter Saturation Voltage

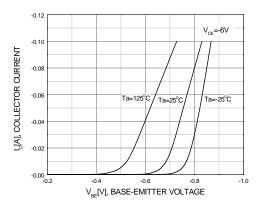


Figure 6. Base-Emitter Voltage

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# Typical Characteristics (Continued)

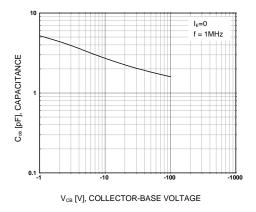


Figure 7. Collector Output Capacitance

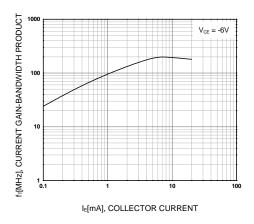


Figure 8. Current Gain Bandwidth Product

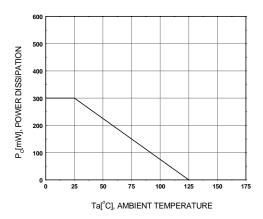
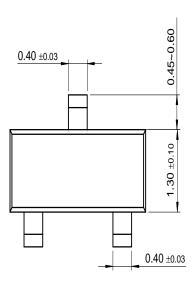
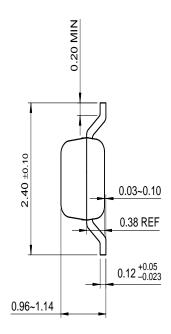


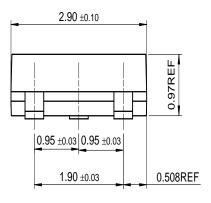
Figure 9. Power Derating

# **Package Dimensions**

# SOT-23







Dimensions in Millimeters

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